In the Matter of	)	
	)	EB Docket No. 04-296
Review of the Emergency Alert System	)	

RESPONSE TO: NOTICE OF PROPOSED RULEMAKING

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Response Offered by:

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III Discussions

C. EAS Structure and EAS Codes

27.

The primary method of delivery of Presidential EAS messages to state and local areas is over-the-air broadcast signals that follow a hierarchical structure, beginning with FEMA's relay of the message to the 34 PEP stations, which in turn are monitored by the 550 LP1 and state relay stations, which in turn are monitored by over 14,000 broadcast stations and 10,000 cable systems nationwide. However, some emergency managers and SECC members say they lack confidence in the manner in which this system is implemented in their states.[1] They believe stations "down the chain" may miss important state and local messages because, for example, stations that they monitor "up the chain" chose not to air a non-Presidential message or are unattended stations that have pre-programmed their EAS equipment to forward only certain event codes. Some claim that this interdependent structure could be problematic even for a national level alert. They believe a non-PEP station may be unable to reliably monitor a signal due to problems with terrain, because it is located in a rural area too far from a PEP station, or because the

[1] *E.g., see generally MSRC EAS Survey*.

PEP station's signal cannot cover the large area it is supposed to cover.[2] Some assert that, in any event, the process takes too long to transmit across an entire state.[3] Accordingly, we seek comment regarding how to improve the distribution of emergency alerts, both national and state/local. Should the originating local agencies transmit alerts directly to as many stations and cable systems as possible without intervening relay stations?[4] Should other technologies, such as satellite delivery systems, be used as part of a backbone to distribute the alert to entry points? Given the changes in technology within the broadcasting industry, is there still a need to structure EAS with the PEP system? To the extent that any businesses using such technologies are small businesses, how should that status affect our analysis? As we discussed in paragraph 25 above, could inconsistencies in the manner in which states implement EAS be alleviated by the adoption of national guidelines?

RESPONSE: Problems resulting from distance from the Local Primaries, Incorrect modulation of the Local Primary FSK and Dual-Tone modulation levels and adverse weather conditions do have a negative impact on reliability. In our experience, these problems do occur, and are often concentrated within specific geographical areas. In addition problems relating to intentional (allowed) retransmit delays cause EAS messages to have expired prior to receipt by the last Decoders in the transmission chain. In a world of instant messaging, email, and immediate worldwide information via digital networks, the inherent relay time needed for current EAS distribution seems excessive. At a minimum, the incorporation of alternate sources such as digital transports should be strongly considered for time-critical emergency messages.

28.

In the *2002 Report and Order*, the Commission amended Part 11 of the Commission's rules by, *inter alia*, adding new state and local event codes, most of which are for non-weather events such as child abductions (Amber Alerts) and new location codes. The Commission did not mandate the use of these codes. Rather, effective May 16, 2002, broadcast stations and cable systems could upgrade their existing EAS equipment to add the new codes on a voluntary basis until the equipment is replaced.[5] All models of EAS equipment manufactured after August 1, 2003, had to be capable of receiving and transmitting the new codes.[6] Broadcast stations and cable systems that replace their EAS equipment after February 1, 2004, must install equipment that is capable of receiving and transmitting the new event codes.[7] We seek comment regarding whether circumstances have changed such that the Commission should adopt rules that require broadcasters and cable operators to upgrade their EAS equipment so that it is capable of receiving and

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[2] Comments can address methods by which emergency managers address particular PEP problems. For example, Michigan was granted a FEMA Hazard Mitigation Grant in 2002 to help solve EAS relay problems and developed a hybrid Internet/satellite relay system in 2003. *See MSRC EAS Survey* at 72.

[3] *Id.*

[4] In an article arguing that this should be done, the author noted that redundant wired and wireless links are not that expensive to implement and maintain between 911 centers and electronic media outlets in population centers. *See* Guy Wire, *Overhauling EAS*, Radio World (February 24, 2004).

[5] 47 C.F.R. § 11.31(e)-(f).

[6] *Id.*

[7] *Id.*

transmitting all current event and location codes, including those adopted in the 2002 Report and Order. If such upgrading of EAS equipment should be required, how much time should broadcasters and cable operators have to replace their EAS equipment? How will this impact small cable operators and broadcasters? Should the government fund upgrades for small systems to mitigate the burden?

RESPONSE: In most cases, upgrading to the newer Event Codes consists of internet based downloads, or EPROM firmware replacements for Encoder/Decoders. These costs should not be excessive. Many states already mandate the Child Abduction Emergency (CAE or Amber Alert). If the FCC does not require equipment be updated to its latest list of Event Codes, it seems that authorities would be well advised NOT to use the newer Event Codes, as they would be unsure of the dissemination.

D. Expanding EAS Requirements on Other Services

29.

In the 1994 *First Report and Order* on EAS**,** the Commission encouraged - but did not require - EAS participation by digital broadcasters.[8] In the *Localism NOI*, however, we noted that digital technologies have evolved, and can allow broadcasters to provide emergency information in innovative ways.[9] For example, using digital technology, broadcast stations can pinpoint specific households and neighborhoods at risk, with minimal burden on the available spectrum.[10] Accordingly, we seek comment on how digital technology can be used to enhance warnings, and to what extent broadcast stations currently make use of that technology. We also recently reached the tentative conclusion that EAS rules should apply to all audio streams broadcast by a radio station, such as IBOC.[11] We seek comment on whether we should adopt rules extending EAS obligations to other digital broadcast media, such as DBS, DTV, and satellite DARS services. Commenters should also address whether, when television stations turn off their analog signals as part of the DTV transition, they could leave a market devoid of an EAS participating broadcaster? Is digital cable television service treated in the same regulatory fashion as is "over the air" digital broadcast? If so, should the Commission extend EAS obligations to digital cable television? Does it continue to serve the public interest to exempt services that reach increasingly larger portions of the American public from any requirement to provide public warning? What burdens would extending the obligations place on these services, and do the benefits outweigh the burdens? For example, if DBS satellites were required to carry EAS, what effect would inclement weather have on their ability to send signals. Further, if an EAS alert needed to be sent to an area on the border of a DMA, where a DBS provider only provided local-into-local service in one DMA, satellite customers in the unserved DMA would not receive the signal. How would an EAS signal be fed to a DBS operator? While it could be sent over fiber to their local receive facility (LRF) where they offer local-into-local service, they

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[8] *See generally First Report and Order*.

[9] *See Localism NOI*, FCC 04-129 at para. 29 (citing *Public Interest Obligations of TV Broadcast Licensees,* Notice of Inquiry, 14 FCC Rcd 21633, 21642 (1999)).

[10] *Id.*

[11] *See Digital Audio Broadcasting Systems and their Impact on the Terrestrial Radio Broadcast Service*, MM Docket No. 99-325, Further Notice of Proposed Rulemaking and Notice of Inquiry, 19 FCC Rcd 7505, 7519 (2004).

would not have an LRF where they don't provide local-into-local service. Similarly, how would DBS operators conduct testing, particularly on a national v. local level? Finally, to the extent that software updates were needed in set top boxes, what would be an appropriate implementation time frame? What about legacy boxes that have already been deployed? Satellite DARS serves the public primarily on a nation-wide, rather than regional, basis. Does this distribution structure affect the ability of satellite DARS licensees to discharge EAS obligations effectively? If the national distribution of satellite DARS services limits the ability to discharge state and local EAS obligations, are such limitations technological or regulatory in nature?

RESPONSE: The increasingly popular transition from analog to digital programming in the broadcast and cable TV markets, as well as the popularity of National (satellite) sources will ultimately make the currently mandated EAS requirements irrelevant. This does not, however, mean that the sources of such digital data have been idle. Cable TV equipment manufacturers and the cable TV industry in particular have been diligent in recognizing the "spirit" of the EAS regulations. Standards such as the ANSI J-STD-042 (SCTE-18) developed by the CEA/EIA and SCTE jointly, and adopted for use in digital-ready cable TVs, specifically address the transport of EAS Audio/Video and the need to insure cable TV viewers see and hear emergency messages. New regulations with regard to CableCard™ capabilities and new implementations of set-top boxes handling In-band and Out-of-Band messages have created an increasingly diverse digital world. Federal regulations regarding what viewers see and hear, rather than the method of transferring the information, may be sufficient.

E. Alternative Public Alert and Warning Mechanisms

33.

As an alternative, would the appropriate approach be to integrate EAS into a PAW "system of systems" by adopting and using a single, integrated interface that would link the emergency manager and all emergency notification and delivery systems, regardless of the technology on which a particular system is based? In this regard, we note that the Organization for the Advancement of Structured Information Standards (OASIS), a not-for-profit, international consortium that addresses the development, convergence and adoption of e-business standards, has adopted the Common Alerting Protocol (CAP) as an OASIS standard.[12] CAP is a standardized, non-proprietary, data interchange format that simultaneously disseminates consistent all-hazard emergency alerts or public warning messages over different kinds of communications networks and systems, including those designed for multilingual and special needs populations. The CAP format is compatible with emerging and existing formats, such as web service applications, NWS' SAME, and the EAS protocol and offers a number of enhanced capabilities.[13] Proponents assert that CAP has the potential to increase warning effectiveness and reduce costs and operational complexity by eliminating the need for

[12] CAP has also been endorsed by organizations such as the Partnership for Public Warning, the ComCARE Alliance, and the National Emergency Management Association's Preparedness Committee.

[13] For example, CAP incorporates geospatial elements based on Open GIS Consortium recommendations to permit flexible but precise geographic targeting of alerts; provides for associating digital images and other binary information with alerts; and supports various mechanisms for ensuring message authenticity, integrity and confidentiality where necessary. *See CAP 1.0 - Fact Sheet* (March 1, 2004) <http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=emergency>.

multiple custom software interfaces to the many APAWS involved in all hazard warning. CAP has also been implemented by several government agencies and private companies, including DHS, NWS, and Comlabs, Inc.[14] We seek comment on whether the CAP could act as an effective interface through which an emergency manager could access multiple emergency notification services, including EAS.

RESPONSE: The use of an open Alerting Protocol such as CAP, that is capable of using infrastructure in place such as the internet, would be desirable and cost effective. The analog paths currently in place could be kept for backup and where network availability is poor. Civil and Homeland Security access could be reduced to nothing more than a software application using existing secure network protocols. Alternative and more informative text could be included with an EAS message. If implemented, care should be taken to allow the analog transferred messages to be rejected as duplicates if a previous digital message was acted upon.

G. Other Issues

42.

Location of EAS Equipment. In the *2002 Report and Order*, the Commission modified its rules to exempt satellite/repeater stations which rebroadcast 100% of their hub station from the requirement to install EAS equipment, provided the hub station complies with existing National level EAS equipment installation, activation and testing regulations.[15] We acknowledge that this practice removes EAS equipment from the satellite/repeater stations and thereby precludes their participation in the State or local EAS activations via the EAS network. We seek comment on the impact this practice has or will have on any proposed changes to EAS or public warning systems. We also seek comment on whether the Commission should extend this practice to any other EAS providers. In this regard, such comment should address whether any centralized placement of EAS equipment, such as at the head-end of a cable system or satellite uplink, would have a positive or negative impact on the efficacy of EAS as a national, state, or local emergency notification system. Where is the best place to locate EAS equipment so it can be the most useful and maintainable?

RESPONSE: We believe the placement of E.A.S. equipment within a cable system's infrastructure is dictated by the architecture of each cable system and there are many variations, even within individual MSOs (multiple system operators). Regardless of the cable system architecture E.A.S. equipment has been implemented to take into account each of these structures and system layouts (i.e. ring networks, redundant networks, spoke/hub layouts, primary/secondary/tertiary hub layout). E.A.S. equipment which is consolidated at one major cable headend usually has additional equipment added which separates out targeted E.A.S. messages to individual counties and/or communities. This is done both through the use of discreet analog hardware and programmable digital software.

End.

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[14] For more information about CAP see <http://www.oasis-open.org/committees/download.php/6334/oasis-200402-cap-core-1.0.pdf> and <http://www.partnershipforpublicwarning.org/ppw/cap.html>.

[15] *See generally 2002 Report and Order*.